



LCD screen TFT matrix is produced using only three lacquering steps

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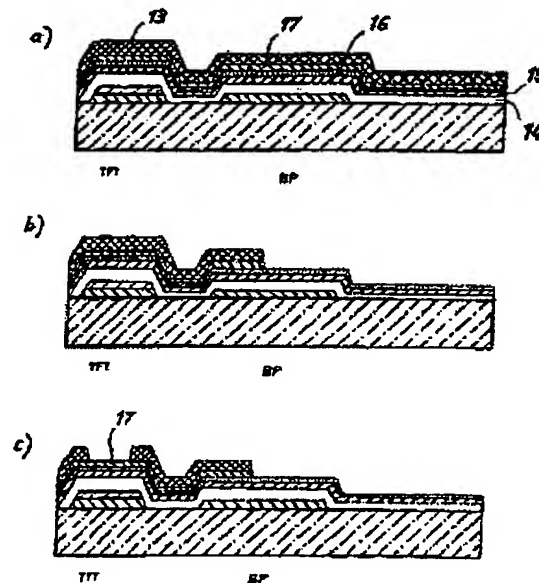
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Abstract of DE19744098

A thin film transistor (TFT) matrix is produced using only 3 lacquering steps by combining several process steps by double exposure of photolacquer layers and by using a lift-off technique for combined removal of photolacquer and passivation in the region of the contacts. A TFT matrix for liquid crystal display screens is produced by (a) applying a transparent conductive layer (11) for the pixel electrodes on a substrate (10); (b) applying a metal (12) for the rows and as gate contacts for the TFTs; (c) coating with photolacquer (13) which is then subjected to a first exposure, followed by structuring the gate contacts and pixel electrodes, and a second exposure, followed by removing the metal layer (12) in the region of the pixels (BP); (d) removing the photolacquer layer (13); (e)



successively applying a gate insulation, a semiconductor especially of a-Si-H and a p- or n-doped semiconductor as source/drain contacts; (f) applying a metallization to the matrix gaps and the source/drain contacts; (g) coating with photolacquer (13) which is then subjected to a first exposure, followed by structuring the metallization outside the semiconductor channels of the TFTs, and a second exposure, followed by structuring the doped and intrinsic semiconductor layers outside the semiconductor channels of the TFTs; (h) removing the metallization and then the doped semiconductor in the channel regions; (i) removing the photolacquer (13) and applying a further contact metallization which is structured after coating with photolacquer; (j) applying a transparent passivation; and (k) removing the passivation in the region of the contacts by removing the photolacquer (13).

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